AMERICAN PARKINSON DISEASE ASSOCIATION
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Parkinson's Disease and Sleep

Why Sleep Matters in Parkinson's Disease

Sleep is essential for movement, mood, and memory, but for many people with Parkinson's disease (PD), a good night's sleep can be difficult to come by. People with PD may have poor sleep due to:

- Sleep disorders associated with PD—A variety of sleep disorders can occur as part of PD, potentially arising due to the presence of Lewy bodies (abnormal protein clumps found in PD) that form in sleep centers of the brain, disrupting their normal function.
- Side effects of PD medications
- PD motor and non-motor symptoms that impact sleep

Poor sleep leads to daytime sleepiness, which can result in napping during the day, perpetuating poor sleep at night and creating a cycle that is difficult to break. Poor sleep can worsen motor function, cognition, attention, and balance, while also increasing anxiety, irritability, and the risk of falls. The good news is that identifying your sleep problems and targeting them can make a real difference.

Evaluating Sleep

A sleep study, also known as polysomnography, can monitor and evaluate sleep either at home or in a lab. Polysomnography records different aspects of the body during sleep, such as brain waves, oxygen levels, heart rate, breathing, eye movements, and leg movements. This helps to determine how your sleep might be affected and aids in the development of a treatment plan. A polysomnogram is indicated if particular sleep disorders are suspected, such as obstructive sleep apnea (OSA), rapid eye movement (REM) behavior sleep disorder (RBD), or periodic limb movements of sleep (PLMS).

To evaluate sleep habits over multiple nights, using sleep actigraphy can be very helpful. An actigraph is a wearable device that detects movement and can determine the amount of time you spend asleep and the number of times you wake up throughout the night.

Sleep Disorders Associated With PD

Insomnia, or difficulty falling asleep and/or staying asleep, is common in PD. People with PD are often more affected by sleep fragmentation—repeated awakenings during the night—than by trouble falling asleep initially.

Solutions: Exercising and staying active during the day is critical to a good night's sleep. Improving sleep hygiene by turning off screens close to bedtime, creating a relaxing environment, avoiding eating and exercising too close to bedtime, keeping a consistent bedtime schedule, and getting exposure to light during the daytime can all be helpful lifestyle modifications. Cognitive behavioral therapy can have a very positive impact on sleep. In some cases, short-term sleep aids such as prescription medications may be helpful as well. Because

sedating medications can increase confusion and balance problems in older adults, they should be used cautiously and reassessed regularly.

Sleep apnea, in which a person's breathing stops and starts during sleep, is another condition that appears more frequently in people with PD than in those without it. There are two types of sleep apnea, and both are more common in PD than in the general population:

- Obstructive sleep apnea (OSA) – in which the airway is narrowed or blocked intermittently during sleep
- Central sleep apnea (CSA) – in which breathing patterns are interrupted due to abnormal brain signals

The prevalence of obstructive sleep apnea in PD is approximately 40%–50%, roughly twice that of age-matched controls, with moderate-to-severe OSA seen in about 20%–25% of patients. Sleep apnea may cause snoring, gasping, choking, morning headaches, unrefreshing sleep, and daytime sleepiness. If these symptoms are present, a sleep study—either at home or in a lab—can confirm the diagnosis.

Solutions: Continuous positive airway pressure (CPAP) therapy is often very effective for treating OSA and can dramatically improve sleep quality, cognition, and daytime alertness when used consistently, though it sometimes takes time, fittings, and coaching to get comfortable with the device. For patients who cannot tolerate CPAP or do not experience consistent benefit from CPAP, there are other options. A mandibular advancement device or an implantable neurostimulator can be effective for the right candidates. For CSA, an adaptive servo-ventilation device may be helpful.

Rapid eye movement (REM) sleep behavior disorder (RBD) is another sleep-related challenge of PD that occurs when the normal muscle paralysis of REM sleep is lost. Instead of staying still, people act out their dreams, which may include kicking, shouting, or even leaping from the bed. This can sometimes cause injury to the person or their bed partner. It is important to note that RBD can be a precursor symptom of PD and may be present many years before motor symptoms appear.

Solutions: The first step in management is to make the bedroom safe—by padding sharp corners, sleeping in a low bed closer to the floor, or moving furniture. If a bed partner is at risk of injury, sleeping in separate beds may be helpful. Medications such as melatonin or clonazepam, under the guidance of a clinician, are sometimes prescribed.

Restless leg syndrome (RLS) is a condition in which a person experiences uncomfortable sensations in the legs that are temporarily relieved by movement.

Solutions: Stretching, avoiding triggers such as caffeine or alcohol, massage, and soaking in a warm bath can all be helpful. People with RLS should be tested for ferritin deficiency, since low ferritin levels can worsen RLS symptoms, and treated if necessary. Certain medications can exacerbate RLS, so be sure to review your prescription list with your neurologist. Medications prescribed to decrease

RLS symptoms include gabapentin or pregabalin. Dopaminergic medications such as dopamine agonists are often used as well. However, it must be noted that they can also lead to a phenomenon called augmentation, in which the symptoms of RLS worsen.

PD Medications That Affect Sleep

Vivid dreams and nightmares can be a side effect of PD medications and can interfere with sleep. If these symptoms become problematic, moving up the last dose of PD medications so they are not taken close to bedtime can be effective. Sleep attacks, or falling asleep without warning, can also be caused by certain PD medications. If this occurs, after consultation with your doctor, the offending medication may need to be lowered or stopped.

Common PD Symptoms That Impact Sleep

There are a number of PD motor and non-motor symptoms that can interfere with sleep. Treating these symptoms can in turn improve sleep.

Nocturia, or frequent nighttime urination, is a common symptom of PD. Many people wake up several times a night to use the bathroom and then may have a hard time going back to sleep.

Solutions: Adjusting evening fluid intake, reducing caffeine or alcohol later in the day, practicing pelvic floor strengthening, or using medications that decrease urinary frequency and urgency can help. If symptoms persist, a referral to a urologist may be appropriate.

Hallucinations, confusion, or nighttime psychosis can also occur in PD and interfere with sleep. Although these symptoms are often a side effect of dopaminergic medication, they can be exacerbated by cognitive dysfunction, poor lighting, impaired vision, and fatigue.

Solutions: Management may start with decreasing PD medications and improving bedroom lighting using nightlights. In some cases, medications to treat hallucinations may be necessary.

Anxiety is common in PD, and persistent worrisome thoughts can make it harder to fall asleep and/or stay asleep.

Solutions: Regular exercise and relaxation techniques may help. Cognitive behavioral therapy can be very effective in controlling anxiety. Certain medications, such as selective serotonin reuptake inhibitors (SSRIs) or selective serotonin and norepinephrine reuptake inhibitors (SNRIs), may also be helpful.

Tremor and rigidity, motor symptoms of PD, can impact sleep. PD symptoms may return during the night when the effects of daytime medications have worn off.

Solutions: Taking a long-acting version of carbidopa-levodopa before bed can help keep PD symptoms at bay through the night. Infusion therapies of carbidopa-levodopa, delivered either subcutaneously or through the gut, are available for overnight medication delivery. Deep brain stimulation has also been shown to improve sleep by providing continuous treatment of motor symptoms at night.

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Fatigue and PD

Fatigue is a very common symptom in PD. It is often due to poor sleep from one of the issues outlined above. However, other causes of fatigue should also be considered, including depression, medication side effects, or unrelated medical issues such as a vitamin deficiency, thyroid problems, or anemia. Low blood pressure, or hypotension, can manifest as fatigue, especially if fatigue occurs more commonly after a large meal. In some cases, fatigue is not caused by poor sleep or any of the issues previously mentioned, but rather by PD pathology in the parts of the brain that control wakefulness.

Sleep-Smart Daily Habits

Establishing healthy daily routines can make a big difference in sleep quality. Keeping regular sleep and wake times, aiming for seven to eight hours in bed most nights, helps anchor the body's internal clock. Morning light—whether from opening shades, sitting by a window, or going outside—is a powerful signal to the brain and reinforces the wake cycle.

It is equally important to wind down intentionally before bed. Creating a 30- to 60-minute pre-sleep routine that may include dimming lights, gentle stretching, breathing exercises, a warm shower, calming music, or reading can train the body and mind to prepare for sleep. Reserving the bed only for sleep, rather than television or phone use, helps strengthen the association between bed and rest.

Managing nighttime triggers is also key. Large fluid intake, caffeine, and alcohol late in the evening can disrupt sleep, so it is wise to limit them to two to four hours before bed. The sleeping environment should be dark, quiet, and cool, with a recommended bedtime temperature of 68°F. Earplugs, an eye mask, or a white-noise machine may also be helpful.

Napping can be helpful if done strategically. A single, short nap of no more than thirty minutes in the early afternoon can improve alertness without interfering with nighttime sleep. However, naps that are too frequent or too long can be very detrimental to good nighttime sleep.

Finally, keeping track of sleep is a useful tool. A simple log of bedtime, awakenings, naps, symptoms, and medications can help reveal patterns. Sharing this information with your medical team allows them to target specific issues more effectively. The APDA Symptom Tracker app can also be a helpful way to record sleep and fatigue alongside other PD symptoms.

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